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12-27-2002

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Recommended Citation

Diersen, Matthew A., "Getting Back on the Horse: Drought Response in 2003" (2002). *Economics Commentator*. Paper 425.
http://openprairie.sdstate.edu/econ_comm/425

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ECONOMICS COMMENTATOR

South Dakota State University

No. 434

December 27, 2002



Getting Back on the Horse: Drought Response in 2003

by
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This has been a trying year for many agricultural producers and agribusinesses in South Dakota. The drought conditions across much of the state reduced yields or damaged the quality of crops that were harvested. Producers that depend on grazing returns were the hardest hit. At the aggregate level, the impact will show up in the most prominent grazing segment -- cattle. In this **Commentator**, I share some thoughts about the current situation and discuss what lies ahead. Specifically, I focus on leading indicators that will soon be known and useable for those rebuilding their herds after 2002 and those responding by supplying replacement livestock or feed.

Taking Stock of the Current Situation

At the state level, small grain and hay crops were most affected by the dry conditions, while row crops fared better. Crop insurance indemnity payments for the 2002 crop year have been substantial, reaching \$286 million to date.ⁱ However, range and pasture accounts for nearly half of the land use in South Dakota and most range was not covered by any insurance. Ending range and pasture conditions (from November 3, 2002) were at 27 percent poor and 30 percent very poor. By comparison to a year earlier, conditions were at 14 percent poor and 8 percent very poor.

Cattle sales at auctions were higher for the July through September period relative to last year. Evidence from stocker cattle data tracked by the

SDSU Economics Department suggests calves were sold earlier this year at lighter weights. Lacking pasture insurance comparable to crop insurance, government support has been the lone offsetting factor, amounting to \$94 million as of late Novemberⁱⁱ. Finally, producers say that feed is still moving around the state. The latest "source" of feed is corn stalks from the eastern part of South Dakota. A weekly publication by the USDA's Agricultural Marketing Service (AMS), "National Hay, Feed and Seed Weekly Summary", covers a variety of hay and feedstuffs reportsⁱⁱⁱ. Having multiple reports allows for price comparisons across a broad range of feedstuffs^{iv}.

Looking Ahead

Valuable information for the grazing market will be available in early 2003 to guide producer decisions. On January 10 the USDA's National Agricultural Statistics Service (NASS) will release two "Crop Production" reports, the usual monthly report and an annual summary. These reports will give hay stocks as of December 1 and any revisions to yield and acres for hay. Acreage may be adjusted downward by abandoned grass or alfalfa hay and be adjusted upward by any other crops taken for hay such as oats or wheat. The resulting production can be added to old stocks to gauge use and supply before December 1. The new stocks number can be used to determine the extent of any inflows of hay into South Dakota and give indications of the amount of feed available.

The important consideration is the supply of feed available per animal. Earlier estimates would indicate a historically tight feed situation. However, anecdotal evidence of

early calf sales and higher culling rates of cows suggests that the feed situation be adjusted to reflect a reduced demand for feedstuffs (as of December 1). For clarity in this situation, we will need to wait until the January 31 release of the "Cattle" report by NASS. The tightness of the feed situation will dictate feed prices in the spring, pasture rental rates, and any additional movement of livestock from areas where feed is in short supply.

Three important pieces of information are available at the end of March. The "Prospective Plantings" report from NASS will be an early indication of changes in land use or shifts to alternative forage crops (such as oats). For any highly unusual crops for a given county, risk management strategies may be prudent and feasible to employ. For the Northern Plains the Agricultural Marketing Policy Center is a source of timely risk management information^v. NASS will also release its first range and pasture conditions report for the year in late March. Finally, the earliest indications of spot or current cash prices for range rents will be available from the AMS in their "Wyoming, Western Nebraska and Southwestern South Dakota Annual Grazing Fee Report", released in late March and late April.

When Pastures Recover

Dry pastures in South Dakota mean two things. First is simply the lack of grass, a valuable resource that can be used to graze a variety of animals and produce financial returns for the owner of the land. Second is the potential loss of the "factory", which usually refers to the cowherd with a calf crop as its product. The distinction between these effects, the loss of grass and the loss of cows, has implications for recovery strategies.

Consider a cow-calf operation where the producer owns the land and had to sell off half of the cowherd because of lack of moisture. The producer has a variety of options to replace revenue once the pastures recover. The cow-calf operation uses grass to maintain cows and grow calves. The opportunity cost of maintaining cows on grass is its next valuable use, likely

producing pounds of meat regardless of what is run (e.g., cows, yearlings, sheep, etc.). The calf crop is the other product produced by the cow-calf operation. It reflects the combination of management time and other inputs from the operation (e.g., feed resources, bulls, etc.).

When the cows are replaced will be dictated by when the pastures recover and by the financial position of the producer. The return of grass is a necessary condition for replacing cows. If the pasture does not recover soon enough, with enough quantity, and with prospects for continuing to grow at pre-drought levels, then cow replacement may not be an alternative. Another necessary condition for replacing cows is the financial soundness of the decision. If the cowherd was liquidated when many others were, the excess supply of culled cows likely dampened the price received. If cows are purchased at a time of excess demand for replacement cows much, if not all, of the profit potential may be bid into the price. Thus, the capital needed to replace cows may be a limiting factor.

Other factors will likely influence the replacement decision. In the short-run, tax considerations are not likely to force the replacement decision. Eventually, cows will need to be replaced or the capital gains taxes paid. The need for cash flow, or short-run revenue, may dictate the age of replacement cows. Bred cows will produce a calf and revenue in the fall of 2003. Open cows or heifers that will not calve until 2004 may not be an option. Most producers are conscious of the cattle cycle. Thus, it will be hard to exploit bargains using such knowledge. However, it should be useful for producers deciding between purchasing replacements versus growing them from within the herd.

Yearlings as an Alternative

If some grass becomes available, then short-term uses can be considered. The pasture could be leased on a monthly basis to realize a cash return without an outlay for livestock.

The pasture could also be stocked with yearlings. Most other alternatives are variations of these two. When purchasing yearlings for grazing there are three considerations. First is the purchase price for the calves. Second is the weight and sex of calves to purchase. Third is the risk tolerance of the producer.

The price paid can be computed based on what can reasonably be expected as the calves harvest the grass and gain weight. The most common practice is to run calves that will reach a feeder weight (700-850#) by late summer or early fall. The fall feeder cattle futures prices can be monitored and used as the expected selling price. From that value on a per head basis the value of grass can be subtracted as it represents the opportunity cost of the grass. If the calves are to be run for four months and grass is renting for \$12 per head per month for yearlings, then subtract \$48 per head off the expected selling price. Then after subtracting the cost of buying, hauling, monitoring (labor), and selling the cattle, one can arrive at a maximum purchase price to pay for calves.

The weight and sex of the calves to be purchased can mean the difference between breaking even and making larger profits. While one may be constrained to what is available when buying calves, there is a way to monitor trends in calf sales. The AMS releases a publication, "Livestock, Meat and Wool Weekly Summary and Statistics", that covers an average price paid for different weights and sexes of calves sold in South Dakota. These prices can be used to compute a price spread between steers and heifers and a price slide for different weights. The spread between steers and heifers is influenced by the relative demand for each sex from feedlots and cow-calf operators looking for replacements. Feedlots and yearling operators

by competing for animals that best match their space availability and feed situations.

Running yearlings can be a risky proposition, especially if financial conditions are tight. Purchased calves represent a large capital outlay and feeder cattle prices could easily move lower during the time the cattle are run on grass. At the time the cattle are done on grass and sold, they could fetch little or no return over their initial cost. However, risk management tools exist to guard against such price moves. Feeder cattle futures and options can be utilized to either price the feeder cattle outright or obtain a minimum price. These costs also need to be considered when establishing a maximum purchase price.

Conclusions

The drought has taxed the decision-making skills of South Dakota producers. However, we are approaching the time of year when some of the uncertainty related to feed prices will be resolved, which should facilitate planning this spring. As for rebuilding cowherds, the alternatives are there. The economics of the situation are like ice – cold, but clear. Rebuilding will take capital and the acceptance of some risk or lower short-run returns.

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325 copies of this newsletter were produced at a cost of less than \$100

ⁱ Data, publications, and reports are found on the USDA's website, <http://www.usda.gov>, unless otherwise noted.

ⁱⁱ See Smit, Krystil. "Drought assistance program numbers detail impact." *Tri-State Neighbor*, November 29, 2002, p. B1.

ⁱⁱⁱ This is a weekly publication of the Livestock and Grain Market News Branch available on line at:
http://www.ams.usda.gov/LSMNpubs/pdf_weekly/feedseed.pdf.

^{iv} Caveat emptor – Latin for "let the buyer beware" has pervaded field discussions of purchasing feedstuffs and services.

^v AMPC has a set of briefings on risk management for alternative crops available online at <http://www.ampc.montana.edu/> in the publications page.